

CLAIMS

What is claimed is:

1 1. A blade assembly that can be assembled into a
2 medical device used to cut a cornea, comprising:
3 a blade that has a cutting edge, a rear edge, and a
4 pair of side edges that extend between said cutting edge
5 and said rear edge; and,
6 a blade holder that is coupled to said blade to define
7 a cutting depth, said blade holder having a color that
8 corresponds to said cutting depth of said blade.

9 2. The blade assembly of claim 1, wherein said
10 cutting depth is dependent upon a dimension from a front
11 surface of said blade holder and said cutting edge of said
12 blade.

13 3. The blade assembly of claim 2, wherein said front
14 surface includes a raised surface.

15 4. The blade assembly of claim 1, wherein said blade
16 holder includes a recess and a plurality of cavities.

1 5. The blade assembly of claim 1, wherein said blade
2 holder has a hole that receives a bonding agent that bonds
3 said blade holder to said blade.

1 6. The blade assembly of claim 1, wherein said blade
2 holder extends from said rear edge of said blade.

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1 7. A blade assembly that can be assembled into a
2 medical device used to cut a cornea, comprising:

3 a blade that has a cutting edge, a rear edge, and a
4 pair of side edges that extend between said cutting edge
5 and said rear edge; and,

6 a blade holder that is coupled to said blade to define
7 a cutting depth, said blade holder having indicator means
8 for providing an indication of said cutting depth of said
9 blade.

1 8. The blade assembly of claim 7, wherein said
2 cutting depth is dependent upon a dimension from a front
3 surface of said blade holder and said cutting edge of said
4 blade.

1 9. The blade assembly of claim 8, wherein said front
2 surface includes a raised surface.

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1 10. The blade assembly of claim 7, wherein said blade
2 holder includes a recess and a plurality of cavities.

1 11. The blade assembly of claim 7, wherein said blade
2 holder has a hole that receives a bonding agent that bonds
said blade holder to said blade.

12. The blade assembly of claim 7, wherein said blade
2 holder extends from said rear edge of said blade.

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13. A blade assembly that can be assembled into a
medical device used to cut a cornea, comprising:

3 a blade that has a cutting edge, a rear edge, and a
4 pair of side edges that extend between said cutting edge
5 and said rear edge; and,

6 a blade holder that is coupled to said blade, said
7 blade having a recess and a plurality of cavities.

1 14. The blade assembly of claim 13, wherein said
2 blade holder has a front surface that includes a raised
3 surface.

1 15. The blade assembly of claim 13, wherein said blade
2 holder has a hole that receives a bonding agent that bonds
3 said blade holder to said blade.

1 16. The blade assembly of claim 13, wherein said blade
2 holder extends from said rear edge of said blade.

58 1 17. A blade assembly that can be assembled into a
96 2 medical device used to cut a cornea, comprising:

3 a blade that has a cutting edge, a rear edge, and a
4 pair of side edges that extend between said cutting edge
5 and said rear edge; and,

6 a blade holder that is coupled to said blade, said
7 blade holder having a recess and cavity means.

1 18. The blade assembly of claim 17, wherein said
2 blade holder has a front surface that includes a raised
3 surface.

1 19. The blade assembly of claim 17, wherein said blade
2 holder has a hole that receives a bonding agent that bonds
3 said blade holder to said blade.

20. The blade assembly of claim 17, wherein said blade
holder extends from said rear edge of said blade.

21. A blade assembly that can be assembled into a
medical device used to cut a cornea, comprising:

4 a blade that has a cutting edge, a rear edge, and a
5 pair of side edges that extend between said cutting edge
6 and said rear edge;

7 a blade holder that is coupled to said blade, said
8 blade having a recess and a hole; and,

9 a bonding agent that attaches said blade holder to said
blade.

1 22. The blade assembly of claim 21, wherein said
2 blade holder has a front surface that includes a raised
3 surface.

1 23. The blade assembly of claim 21, wherein said blade
2 holder extends from said rear edge of said blade.

48 1 24. A blade assembly that can be assembled into a
2 medical device used to cut a cornea, comprising:

3 a blade that has a cutting edge, a rear edge, and a
4 pair of side edges that extend between said cutting edge
5 and said rear edge; and,

6 a blade holder that is coupled to said blade, said
7 blade holder having a recess and bonding access means; and,

8 bonding means for bonding said blade holder to said
9 blade.

1 25. The blade assembly of claim 24, wherein said blade
2 holder has a front surface that includes a raised surface.

1 26. The blade assembly of claim 24, wherein said blade
2 holder extends from said rear edge of said blade.

1 27. A blade assembly that can be assembled into a
2 medical device used to cut a cornea, comprising:

3 a blade that has a cutting edge, a rear edge, and a
4 pair of side edges that extend between said cutting edge
5 and said rear edge; and,

6 a blade holder that is coupled to said blade, said
7 blade having a front surface that includes a raised
8 surface.

1 28. The blade assembly of claim 27, wherein said blade
2 holder extends from said rear edge of said blade.

1 29. A blade assembly that can be assembled into a
2 medical device used to cut a cornea, comprising:

3 a blade that has a cutting edge, a rear edge, and a
4 pair of side edges that extend between said cutting edge
5 and said rear edge; and,

6 a blade holder that is coupled to said blade, said
7 blade holder having a front surface and reference surface
8 means for establishing a cutting depth of said blade.

1 30. The blade assembly of claim 29, wherein said blade
2 holder extends from said rear edge of said blade.

1 31. A blade assembly that can be assembled into a
2 medical device used to cut a cornea, comprising:

3 a blade that has a cutting edge, a rear edge, and a
4 pair of side edges that extend between said cutting edge
5 and said rear edge; and,

6 a blade holder that is coupled to said blade such that
said blade holder extends from said rear edge of said
blade.

1 32. An assembly tool for assembling a blade holder to
2 a blade to create a blade assembly used to cut a cornea,
3 comprising:

4 a base;

5 a slide bar coupled to said base; and,

6 an adjustable stop that is coupled to said base.

7 33. The assembly tool of claim 32, further comprising
8 a cannula coupled to said base.

1 34. The assembly tool of claim 32, wherein said
2 adjustable stop includes a micrometer.

1 35. The assembly tool of claim 32, further comprising
2 a pin attached to said base.

3 36. An assembly tool for assembling a blade holder to
4 a blade to create a blade assembly used to cut a cornea,
5 comprising:

6 base means to support a blade;

7 press means for pressing a blade holder into the blade;

8 and,

9 adjustment means for varying a cutting depth of the
blade.

1 37. The assembly tool of claim 36, further comprising
2 bonding means for introducing a bonding agent to the blade
3 to bond the blade holder to the blade.

1 38. The assembly tool of claim 36, wherein said
2 adjustment means includes a micrometer.

1 39. The assembly tool of claim 36, further comprising
2 alignment means attached to said base.

1 40. A method for assembling a blade assembly,
2 comprising;
3 adjusting a position of a stop; and,
4 pushing a blade holder onto a blade until the blade
5 holder engages the stop.

1 41. A blade package, comprising:
2 a pair of covers, at least one of said covers having an
3 opening to allow inspection of the blade assembly.

1 42. A blade package, comprising:
2 a pair of covers, at least one cover having a color
3 indicative of a cutting depth of the blade assembly.

1 43. A blade package, comprising:

2 a pair of covers that enclose a blade assembly, at
3 least one cover having means for providing an indication of
4 the cutting depth of the blade assembly.

1 44. A gauge for a blade assembly, comprising:
2 a housing that has a slot adapted to receive a blade
3 and a cavity adapted to receive a blade holder attached to
4 the blade.

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6 45. A blade assembly that can be assembled into a
7 medical device used to cut a cornea, comprising;
a blade holder having a front surface; and
a blade attached to said blade holder, said blade
having a pair of side edges, a cutting edge, a rear edge
and an opening located between said cutting edge and said
front surface between said side edges.

1 46. A caliper assembly for measuring a corneal flap,
2 comprising:
3 a caliper that has a readout and a tip; and,
4 a cover attached to said tip.

1 47. A method for measuring a corneal flap, comprising:
2 attaching a pair of covers to a pair of tips of a
3 caliper;
4 measuring a combined thickness of the covers;
5 reading a measurement of a corneal flap located between
6 the cover; and,
7 determining the thickness of the corneal flap by
8 subtracting the thicknesses of the covers from the reading.